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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/653,962	09/04/2003	Atsushi Nakamura	00862.023209	4026
5514 7590 06/20/2007 FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			EXAMINER AYASH, MARWAN	
			ART UNIT 2185	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/653,962	Applicant(s) NAKAMURA, ATSUSHI	
	Examiner Marwan Ayash	Art Unit 2185	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/23/03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. **Claims 1, 2, 6, 12 are rejected** under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention because it is unclear what is meant by "a new data storage area for the storage area" such that the scope of the claims is indefinite.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
 1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. **Claims 1-7, 11-12 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Leong et al. (US Patent # 2003/0182503).

With respect to **independent claims 1, 2, 6, 12** Leong discloses: An information processing system/method/apparatus including

first and second devices [*Leong – Fig. 1, elements 105, 115 and/or 145, 150, 155*];

wherein said first device comprises a transmission unit/means for transmitting one request which designates a plurality of data storage areas to said second device [*storage system 105 working in conjunction with any of the managers, modules in memory 125 is operable to transmit a request designating a plurality of data storage areas to said second device such as disk array 115 (Leong – abstract, Fig. 1, paragraph 0020)*],

said second device comprises completion notifying means for notifying said first device of completion of a data communication for one of the plurality of data storage areas [*Leong – paragraph 0050, 0051, 0052, 0065*];

and in accordance with the notification of completion of the data communication for one of the plurality of data storage areas, said transmission means transmits one request which designates a data storage area, a data communication for which is not complete, and a new data storage area for the data storage area, the data communication for which is complete, to said second device [*a plurality of I/O tasks are defined responsive to a request (Leong – paragraph 0020); these tasks may include accessing ‘new’ data storage areas (Leong – paragraph 0016), and/or ‘not new’ data storage areas (Leong – paragraph 0015, 0020)*].

It is unclear whether Leong explicitly discloses the last limitation of the instant claim primarily because of the 35 U.S.C. 112 issues in the last limitation, since these issues obfuscate the meaning and the scope of the instant claim. However, according to the examiners interpretation of the claim language, Leong at least suggests or implicitly teaches this limitation as discussed in the respective claim limitation above.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to execute a data access request (responsive to a completion notification) comprised of one or more I/O operations which designate or otherwise access a ‘previous’ or ‘not new’ data storage area in addition to a ‘new’ data storage area in the invention of Leong because such an implementation would contribute to balancing the system load and efficiently using system resources (*Leong – abstract*), and furthermore because such an implementation would allow hierarchical and/or dependent I/O tasks to execute efficiently in the proper order.

With respect to **dependent claim 3** as applied to claim 2 above Leong discloses the two devices are connected via a communication control bus complying with IEEE1394 [*The examiner is taking official notice that connecting to storage via IEEE 1394 would have been obvious to one having ordinary skill in the art at the time of the invention. Implementing this feature in the invention of Leong would have been obvious to one having ordinary skill in the art because connecting to external storage via IEEE 1394 is old and well known in the art (as evidenced by Palatov US PGPub # 2001/0029583 - page 8 paragraph 0098, page 14 paragraph 0164), and one of ordinary skill would be motivated to connect to external storage via IEEE1394 because an IEEE1394 interface is a known serial high speed interface for storage devices, and also because Leong suggests this limitation by disclosing coupling storage disks to a storage system over an I/O interconnect arrangement, such as a conventional high-performance, Fibre Channel serial link (Leong – paragraph 0037).*].

With respect to **dependent claims 4, 7** as applied to claims 2, 6 above Leong discloses transmitting a request block [*Leong – paragraph 0046*] which contains a plurality of pieces of identification information respectively indicating the plurality of data storage areas, and commands respectively for the plurality of data storage areas [*an exemplary I/O task includes eight parameters, which include identification information respectively indicating the plurality of data storage areas, and commands respectively for the plurality of data storage areas (Leong – paragraph 0047 - 0049).*].

With respect to **dependent claim 5** as applied to claim 2 above Leong discloses writing data on the data storage area designated by the request or reading data from the data storage area designated by the request [*Leong – paragraph 0020*].

With respect to **dependent claim 11** as applied to claim 1 above Leong discloses a determination unit that determines on the basis of a plurality of pieces of identification information respectively indicating the plurality of data storage areas whether or not a data buffer has been designated by the previously received request [*Leong – paragraphs 0047 - 0049*].

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. **Claims 8-10, 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Leong.**

With respect to **independent claim 8** Leong discloses: An information processing apparatus which can communicate with another device [*Leong – Fig. 1, elements 105, 115 and/or 145, 150, 155*], comprising:

a unit that receives one request which designates a plurality of data storage areas [*storage system 105 working in conjunction with any of the managers, modules in memory 125 is operable to transmit a request designating a plurality of data storage areas to said second device such as disk array 115 (Leong – abstract, Fig. 1, paragraph 0020)*];

and a completion notifying unit that notifies completion of a data communication for one of the plurality of data storage areas [*(Leong – paragraphs 0050, 0051, 0052, 0065); please note that the modules/managers in memory may be implemented in hardware or software (Leong - 0032)*].

With respect to **dependent claim 9** as applied to claim 8 above Leong discloses transmitting data to the other device so as to write data in the data storage area designated by the request or receiving data from the other device so as to read data from the data storage area designated by the request [*Leong – paragraph 0020*].

With respect to **dependent claim 10** as applied to claim 8 above Leong discloses when data is written in one of the plurality of data storage areas or data is read out from the data storage area, said completion notifying unit notifies completion of a data communication for that data storage area [*(Leong – paragraphs 0050, 0051, 0052, 0065, 0020); please note that the modules/managers in memory may be implemented in hardware or software (Leong - 0032)*].

With respect to **independent claim 13** Leong discloses: A communication method in an information processing apparatus which can communicate with another device [*Leong – Fig. 1, elements 105, 115 and/or 145, 150, 155*], comprising:

receiving, from the other device, one request which designates a plurality of data storage areas [*storage system 105 working in conjunction with any of the managers, modules in memory 125 is operable to transmit a request designating a plurality of data storage areas to said second device such as disk array 115 (Leong – abstract, Fig. 1, paragraph 0020)*];

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making a data communication for one of the plurality of data storage areas [*Leong* – paragraph 0046];

and notifying the other device of completion of a data communication for one of the plurality of data storage areas [*Leong* – paragraphs 0050, 0051, 0052, 0065].

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. When responding to the office action, applicants are advised to clearly point out the patentable novelty which they think the claims present in view of the state of the art disclosed by the references cited or the objections made. Applicants must also show how the amendments avoid such references or objections. See 37 C.F.R. 1.111(c). In addition, applicants are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist examiner in locating the appropriate paragraphs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marwan Ayash whose telephone number is 571-270-1179. The examiner can normally be reached on Mon-Fri 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sanjiv Shah can be reached on (571)272-4098. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Marwan Ayash
Examiner
Art Unit 2185



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6/7/07